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ABSTRACT

Although few technologies have expanded as rapidly as computer technology, little is known about education and training for computers. In view of this, experts in the fields of computer technology and computer training were interviewed to identify those elements that are essential in training workers to become proficient with computers. Seven experts (including managerial personnel from major computer firms, two trainers, and three heads of university departments related to computerization and training) were asked a series of open-ended questions in 2-hour interviews. According to the experts, supportive leadership is a must for introducing computers, and the success or failure of a computerization process rests on the shoulders of supervisors and trainers. Supervisor participation in vendor training, especially in positions where they were perceived as part of an employer-supervisor team and in which they provided peer support to employees during the learning process, was said to be the most effective strategy for introducing computers into an organization. (MN)

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The Key to Successful Computerization is Through Good Trainers.

by

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In the history of industrial change only a few technologies have expanded as rapidly as the computer (Taylor, 1990). Since 1975, computer sales have doubled (Goldstein and Fraser, 1885). Levin and Rumberger (1986), in looking at education and training requirements, have found that within the last 15 years, small businesses have outperformed large ones by a ratio of two to one through the application of computers.

Little is known about education and training for computers. What we do know through research is that training is necessary and that there are no guidelines for that training. We also know that organizations go through a transition phase during the process of changing over from a manual operation to an automated one. The success or failure of computerization is dependent on the relationships between the coworkers within the organization and the training of personnel on computers.

Learning how to use computers requires certain attributes of the workers within the organization. First, they need a competency in reading comprehension and reasoning skills. Second, they must be motivated.

The purpose of this paper is to identify two important elements that are necessary in introducing new technology in an organization and bringing about change.

METHODOLOGY

A standard interview protocol was administered to all respondents and required one to two hours to complete. Three experts were interviewed via telephone, and four were interviewed in person. The protocol was developed from a list of items about the appropriateness of the principles and the introduction process. The questions were borrowed from the study by Bikson, Stasz, and Mankin (1985) for Rand Corporation. The questions were open-ended and the participants were encouraged to draw from their experiences regarding the introduction of computers in an organization and to assess the training of personnel. The methodology was guided by the instruction of Borg and Gall (1983), and Yin (1987).

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Largely on the basis of advice from highly regarded computer experts, (an IBM vice president, a Wang Communications training manager, an AT&T programmer and trainer, head of LILCO's computer training division, a researcher for the National Commission for Employment Policy and three university department heads on computerization and training) I found two major principles regarding computerization which I tested against the experience of a municipal agency and a medium sized private agency, that the instruction provided in the training of workers to become proficient with computers was significantly related to the supervisors acceptance of computerization and the quality of the trainers.

According to the experts, managers need to enable their staff to finish the daily affairs. Leadership is inseparable from staff's needs and goals. When two or more people engage in an activity in such a way that leaders and followers work together through mutual support for a common purpose, then you have supportive leadership. "It is important for top managers on downward in an organization to be involved in the computerization process," a manager from IBM stated.

The experts unanimously agree that having supportive leadership is a must for introducing computers. They have concluded that top managers must be included in the training. One training expert said, "Decisions from the top that predicted technology (would) benefit the corporation had clout. But, other times, the top would not support technology, and depending on the prevailing management, corporate executive attitudes toward computerization can put a crimp in the automation process." Still another researcher believes that leadership is essential. He commented, "Management must take an active part in the computerization process." A training expert insisted, "Management from the top down must make sure the organization's needs are being met. In order to get top managers to take an active part in the computerization process, the trainers must include bosses in their training classes." As one of the other research trainers explained, "We will train the supervisors first. Our implementation process is based on the premise that the supervisors should be using the computers first. After the supervisors feel confident on the computers, they will teach their subordinates."

The success or failure of a computerization process rests on the shoulders of the supervisors and the trainers.

Workers who are part of teams, task forces, projects, and work circles all have on thing in common: They keep the organization functioning, according to May, Moore, and Zammit (1987). Workers like to feel they have choices in the change process. A good trainer and curriculum encourages workers to participate by giving

them a better understanding of the use of computers in their jobs. Once workers realize the benefits derived from the computers they become more enthusiastic about learning how to use them. A Washington researcher found, "There is a direct relationship between the quality of training and the success of the implementation process."[11] An IBM trainer and researcher commented, "A good trainer can ease the anxiety of the changeover on the first day of classes by educating workers in the new terminology, and reassuring them that by making a mistake they are not going to break the machine."

In conclusion, the supervisors' participation in the vendor training enhanced the introduction of computers. In these cases the supervisors were in a position and peer support during the learning process. The introduction of computers was most successful in those offices whose supervisors participated.

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